

ORIGINAL ARTICLE

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**COMMUNITY PARTICIPATORY APPROACH: AN IMPORTANT OPTION IN CARDIOVASCULAR DISEASES PREVENTION AND CONTROL**

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**ABSTRACT**

**Introduction :** Despite the number of information generated by researchers, cardiovascular diseases problem has not clearly declined and perhaps in certain situation it is gradually increasing, affecting people who are previously at low risk. There is a tendency to believe that favourable outcomes can always be expected once intervention activities, like exercise promotion, are carried out, but practical experience gives rise to serious doubt.

**Methods :** A greater understanding of the socialization mechanisms operating in the adoption of physical activity in CVD control and allow specific exercise prescriptions for community-based prevention and control is important. This paper highlighted the author's feeling about controlling chronic diseases by mean of community intervention.

**Results :** This analysis has strongly believed that the important impetus of any community intervention approach should be oriented in the form of "from people to people".

**Conclusion :** More emphasis needs to be placed on effective management and parameters for assessment of its management success.

**Keywords :** CVD prevention and control, community-based exercise, management, outcomes.

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## INTRODUCTION

Researchers all over the world have continuously contributed knowledge on cardiovascular diseases (CVD) and its related risks. Despite these numbers of information, the trend of cardiovascular problems has not significantly declined and perhaps gradually increased affecting those who are previously known to be less risky<sup>1</sup>. CVD still identified to be the top leading killer worldwide and is also the main source of psychosocial burden of the community particularly to the women<sup>2</sup>. Its problems are expected to further increase as human beings are constantly modified and manipulated by unpredictable and dynamic human activities and globalization phenomena. Furthermore the current advances in CVD pharmacotherapy and others clinical interventions are not always guaranteed of a permanent cure, improve survival or prognosis, sustainable compliances, prolonging life and improving quality of life, thus the mortality and its associated biological and management complications are still prevalence<sup>3</sup>. Although some interventions are proven to reduce CVD risks but on the other hand it enhances the other component<sup>4</sup>.

In 2005, World Health Organization (WHO) has estimated approximately 17.5 millions people died because of CVD-related problem. These constituted 30% of all deaths. By year 2015, it is expected a total 20 million people will die and more than 80% occurred in low and middle income countries<sup>5</sup>. In Malaysia, based on the 3<sup>rd</sup> national health Morbidity Survey's statistics, prevalence of hypertension among adults aged 30 and over is 42.6%, a relative increase of 30% in the 10 years since the last survey.

Although CVD are varied demographically and geographically, its dramatically increased with age and affecting certain population, have posted a major challenges in prevention and control of this group of diseases. Therefore strategic should be rigorously implemented by practitioners and targeted by health systems throughout the world. These actions should be pursued with vigour in accordance with current clinical guidelines, with the details of implementation adapted to the economic and cultural setting<sup>6</sup>.

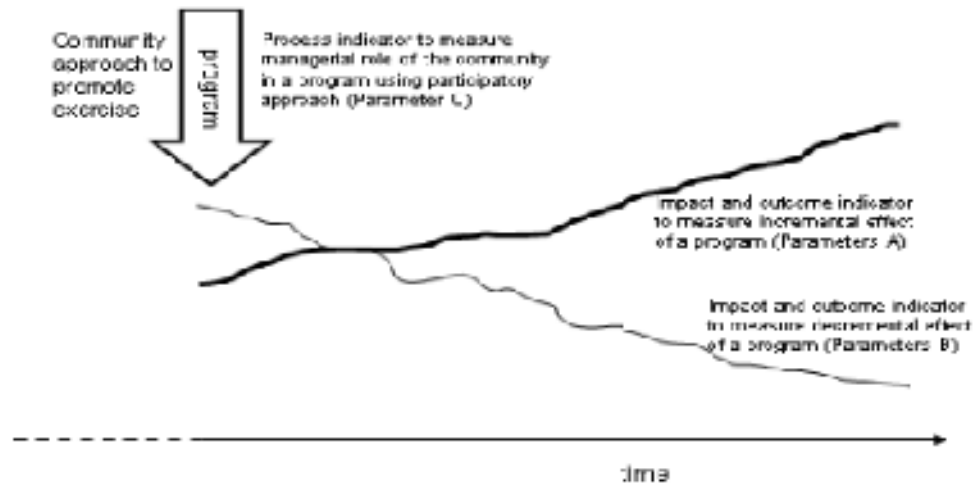
The proven link between hypertension and CVD with various factors particularly sedentary lifestyle or lack of exercise has been well documented, and about a 30% higher risk of developing hypertension<sup>7-10</sup>. Similarly also to

the benefits of exercise on certain cardiovascular problems<sup>11-16</sup>. Unfortunately, most of the exercise-related activities are not systematically promoted and incorporated into the community, and often not complemented according to the intended ideal plan and in its holistic approach<sup>17</sup>. Tendency to believe that positive outcomes are always expected once intervention activities are carried out on its underlying factors is often ended up with an open inquiry. Studies have explicitly shown and proven that change of factors such as knowledge, attitude and probably belief are not necessarily guaranteed change of the physically active behaviour and finally its related illness<sup>19</sup>. The greater understanding of the biological mechanisms as well as its multiple biomarkers toward CVD development are needed so that the benefit role of physical activity in preventing and controlling of CVD can be developed and applied accordingly<sup>20</sup>.

It is time for the leader to really analysed and evaluated the existing exercise-based intervention activities particularly community-based approach so that a more acceptable and appropriate plan could be proposed, implemented and finally adopted.

From community intervention perspective the meaning of "evidence-based knowledge" should be something that is proven and scientifically sound; something that is effective (in term of impacts and outcomes) and something that is also efficacious (in term of its processes). Favourable perception of the community towards CVD, ignoring sedentary lifestyle and improve quality of life of the victims could be some examples of its impact and outcome indicators reflecting exercise promotion intervention. Whereas, positive group dynamic and team building of the program implementation should be the examples of its process.

It is so important that promoting exercise (or other related physical activities) should not only limited or merely satisfying its scientific outcomes i.e. looking at certain interested specific health benefits, but it should also be an agenda of social development i.e. looking at other psychosocial benefits, particular those that are linked to the matters that enhance the well being of the community. Only, with well planned efforts applying particularly sustainable quasi-experimental participatory intervention approach, lots of new evidence-based knowledge, facts and collateral benefits of this kind of intervention could constantly be observed and generated.



**Figure 1 The success of any program is not only centred in its outcomes, but also depending on the process involved in managing the program**

In addition, promoting exercise should not only be centred at its observed effect - ie. Parameters A or Parameters B as shown in fig. 1, but one must also consider the ways the intervention is being provided and carried out - particularly the managerial process involved in managing the program<sup>21</sup>. In fact, the most important impetus of any community intervention approach should be oriented in the form of "from people to the people". It is not in its identity or its branded product name, but more towards its real group processes. Therefore, it is not the Yoga, Tai Chi, Qigong, Waitankung, Naetankung, Poco Poco, Aerobic Exercise, mysenamdotcom, Martial Arts and whatever similar program, activities, initiatives and names that are being practiced and commercially promoted, but more importantly is how this various activities are fused together in line with

the innovations of modern medicine to increase life expectancy and improve quality of life of the people<sup>22</sup>.

A community participatory intervention approach certainly needs some kind of managerial role namely leadership, planning, organizing, coordinating, marketing, promoting, socialization etc. This various roles and of course responsibility should be well positioned, hoping that they can be slowly manifested as community advancing its commitment based on self-reliance and self-sufficient concept. Then, the role of the authority (or health promotion initiator) could slowly be withdrawn once the community is already capable to function independently. The example of parameters in assessing the community commitment (Parameter C as shown in fig. 1) are shown in Table 1.

**Table 1** Some parameters could be used to assess the process involved in managing the program using participatory approach

Type of parameter	Example of parameter
<b>Leadership characteristic</b>	<ul style="list-style-type: none"> <li>• Communication skills</li> <li>• Leadership style</li> <li>• Direction of vision</li> <li>• Planning skills</li> <li>• Managerial skills</li> <li>• Creativity and innovativeness</li> <li>• Coordinating effort</li> <li>• Group cohesiveness</li> </ul>
<b>Group dynamic characteristics</b>	<ul style="list-style-type: none"> <li>• Group commitment</li> <li>• Group lifestyle and culture</li> <li>• Group identity and norm</li> <li>• Group function and development</li> <li>• Participatory style</li> <li>• Communication skills</li> </ul>
<b>Individual characteristics</b>	<ul style="list-style-type: none"> <li>• Motivation level</li> <li>• Creativity and innovativeness</li> <li>• Knowledge level on the program</li> <li>• Self value</li> <li>• Self perception</li> </ul>

It is important that at its initiation phase, core activities particularly in the area of professional backup, training, grooming, financial and planning-evaluation development, should be well provided. Through continuous group process, community representatives are tuned towards leadership, managerial and others community development skills, and at the end of the day, program sustainability could be expected if the community accepts it as their own program,

A concerted effort must be continuously done to involve community as their important stakeholder to the program. If exercise promotion using participatory approach is well assimilated into the target community, its benefits are not only limited to things related to CVD, but it is also benefiting other chronic diseases include cancer, obesity, metabolic diseases and others. For elderly people and sufferer of chronic illness, exercise is certainly important behavioural intervention as non-pharmaceutical and non-invasive options in diseases control, and should be adopted and considered<sup>23</sup>. Therefore, the community participatory approach must be used as an

alternative option in managing and controlling of the diseases in the future.

## REFERENCES

1. Conen D, Ridker PM, Buring JE, Glynn RJ. 2007. Risk of cardiovascular events among women with high normal blood pressure or blood pressure progression: prospective cohort study. *British Medical Journal*. **335**(7617):408-409.
2. Jafar TH. 2006. Women in Pakistan have a greater burden of clinical cardiovascular risk factors than men. *Int J Cardiol* **26**;106(3):348-354.
3. Calhoun DA, Jones D, Textor S *et.al* 2008. Resistant hypertension: diagnosis, evaluation, and treatment: a scientific statement from the American Heart Association Professional Education Committee of the Council for High Blood Pressure Research. *Circulation*. Jun 24;**117**(25):510-526.
4. Lee DH, Ha MH, Kim JR, Jacobs DR Jr. 2001. Effects of smoking cessation on change in blood pressure and incidence of

- hypertension: a 4 year follow-up study. *Hypertension*. **37**(2):194-198.
5. WHO Fact Sheet no 317 (2007)
6. Bakris G, Hill M, Mancia G *et.al* 2008. Achieving blood pressure goals globally: five core actions for health-care professionals. A worldwide call to action. *J Hum Hypertens*. 2008 Jan;**22**(1):63-70.
7. Haapanen N, Miilunpalo S, Viuori I, Oja P, Pasanen M. 1997. Association of leisure time physical activity with the risk of coronary heart disease, hypertension and diabetes in middle-aged men and women. *International Journal of Epidemiology*. **26**:739-747.
8. Fagard RH. 1999. Physical activity in the prevention and treatment of hypertension in the obese. *Medicine and Science in Sports and Exercise*. 31 Suppl., S624-S630
9. Bassett DR Jr, Fitzhugh EC, Crespo CJ, King GA, McLaughlin JE. 2002. Physical activity and ethnic differences in hypertension prevalence in the United States. *American Journal of Preventive Medicine*. **34**:179-186.
10. Sobagwi E, Mbanya JC, Unwin NC, Kengne AP, Fezeu L, Minkoulou EM, Aspray TJ, Alberti KG. 2002. Physical activity and its relationship with obesity, hypertension and diabetes in urban and rural Cameroon. *International Journal of Obesity and Related Metabolic Disorders* **26**: 1009-1016
11. American College of Sports Medicine. Position stand. Exercise and hypertension. *Medicine and Science in Sports and Exercise*. 36:533-553 (2004)
12. Hagberg JM, Park JJ, Brown MD. 2000. The role of exercise training in the treatment of hypertension: an update. *Sports Medicine*. **30**:193-206.
13. Fagard RH. 2001. Exercise characteristics and the blood pressure response to dynamic physical training. *Medicine and Science in Sports and Exercise*. 33 Suppl. S484-S492.
14. Kokkinos PF, Narayan P, Papademetriou V. 2001. Exercise as hypertension therapy. *Clinical Cardiology*. **19**:507-516.
15. Ehsani AA. 2001. Exercise in patients with hypertension. A review. *American Journal of Geriatric Cardiology*. **10**:253-259.
16. Veronique AC, Robert HF. 2005. Effects of endurance training on blood pressure, blood pressure-regulating mechanisms, and cardiovascular risk factors. *Hypertension*. **46**:667-675.
17. National Center for Chronic Disease Prevention and Health Promotion, Centers for Disease Control and Prevention. Physical Activity and Health: A Report of the Surgeon General, 1996.
18. Siegel D. 2005. Barriers to and strategies for effective blood pressure control. *Vasc Health Risk Management* (1):9-14.
19. Khalib AL. Health promotion: the others option. Proceedings of the 14<sup>th</sup> national health colloquium; 2007 Sept 4-5; Kuala Lumpur; 2007.p.8
20. Wang TJ, Gona P, Larson MG, Levy D *et.al* 2007..Multiple biomarkers and risk of incident hypertension. *Hypertension*. **49**:432
21. Khalib AL, Syed AJ, Muhammad AR, Osman A, Rahmah A, Khairul H, Rizam AR. 2007. Lessons learned from health and fitness prescription: a Malaysian experience. *Med J of Indonesia*. **16**(1):39-46 (2007)
22. Go VL, Champaneria MC. 2002. The new world of medicine: prospecting for health. *Nippon Naika Gakkai Zasshi* . 91 Suppl.: 159-163.
23. Ilkka Vuori. Physical inactivity as a disease risk and health benefits of increased physical activity. In: Health enhancing physical activity. *Perspective* 2004: vol 6.